

CLAIMS

1. A surface finishing pad adapted for mounting to a mounting plate, the surface finishing pad including a dust extraction aperture therethrough and said dust extraction aperture being adapted to align with a vacuum port of a mounting plate.
2. A surface finishing pad as in claim 1 including more than one dust extraction aperture, each said dust extraction aperture being adapted to align with a respective vacuum port of a mounting plate.
3. A surface finishing pad as in either claim 1 or claim 2 wherein the surface finishing pad is a disc.
4. A surface finishing pad as in claim 3 wherein the diameter of the surface finishing pad is less than or equal to 203 mm.
5. A surface finishing pad as in either claim 1 or claim 2 wherein the surface finishing pad is rectangular.
6. A surface finishing pad as in any one of the preceding claims including adhesive means adapted for adhering the surface finishing pad to a mounting plate.
7. A surface finishing pad as in any one of claims 1 to 5 inclusive including hook and loop means adapted for attaching the surface finishing pad to a mounting plate.
8. A surface finishing pad as in any one of the preceding claims adapted for sanding, burnishing or polishing of timber surfaces.
9. A surface finishing pad as in any one of claims 1 to 7 inclusive adapted for sanding, burnishing or polishing of stone surfaces.
10. A surface finishing pad as in any one of claims 1 to 7 inclusive adapted for sanding, burnishing or polishing of acrylic surfaces.
11. A surface finishing pad including at least one dust extraction aperture therethrough, a plurality of finishing areas proud of an intervening web, the surface finishing pad being mountable to a mounting plate having at least one vacuum port with which the dust extraction aperture or dust extraction apertures

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are adapted to align, and the surface finishing pad being adapted such that dust tends to progress into the proximity of the web and may therefrom be extracted through the dust extraction aperture or dust extraction apertures by vacuum dust extraction means.

5 12. A surface finishing pad as in claim 11 wherein the dust extraction aperture or at least one of the dust extraction apertures is within the web.

13. A surface finishing pad as in claim 11 wherein the dust extraction aperture or at least one of the dust extraction apertures is within a one of the finishing areas.

Sub 13 14. A surface finishing pad as in any one of claims 11 to 13 inclusive being circular and adapted to be mountable to a mounting plate driven by a random orbital means.

15. A surface finishing pad as in any one of claims 11 to 14 inclusive wherein the centre of the surface finishing pad is part of the web.

15 16. A surface finishing pad as in any one of claims 11 to 15 inclusive wherein the finishing areas are radially spaced about the centre of the surface finishing pad.

17. A surface finishing pad as in claim 16 including at least three finishing areas.

20 18. A surface finishing pad as in claim 16 including four finishing areas.

19. A surface finishing pad as in any one of claims 15 to 18 inclusive including a plurality of dust extraction apertures, at least one dust extraction aperture being through the web and proximal to the centre of the surface finishing pad, and other dust extraction apertures being through the web and proximal to the periphery of the surface finishing pad.

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20. A surface finishing pad as in any one of claims 15 to 19 inclusive including a plurality of dust extraction apertures, at least one dust extraction aperture being through each finishing area.

30 21. A surface finishing pad as in claim 20 wherein the finishing areas are circular and the dust extraction aperture of each finishing area being between the centre of the respective finishing area and the periphery of the respective finishing area distal the centre of the surface finishing pad.

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22. A surface finishing pad as in any one of claims 11 to 20 inclusive wherein each finishing area has at least one channel therein adapted to direct dust to the dust extraction aperture or a one of the dust extraction apertures.
23. A surface finishing pad as in claim 21 wherein each finishing area has at least one channel therein adapted to direct dust to the dust extraction aperture through the respective finishing area.
24. A surface finishing pad as in any one of claims 11 to 23 inclusive wherein the finishing areas are circular and of diameter less than or equal to 203 mm.
25. A surface finishing pad as in any one of claims 11 to 24 inclusive adapted for sanding, burnishing or polishing of timber surfaces.
26. A surface finishing pad as in any one of claims 11 to 24 inclusive adapted for sanding, burnishing or polishing of stone surfaces.
27. A surface finishing pad as in any one of claims 11 to 24 inclusive adapted for sanding, burnishing or polishing of acrylic surfaces.
28. A mounting plate for a surface finishing machine including at least one vacuum port, a plurality of mounting areas proud of an intervening web and adapted to have mounted thereto surface finishing pads, and the mounting plate being adapted such that dust tends to progress into the proximity of the web and may therefrom be extracted through the vacuum port or vacuum ports by vacuum dust extraction means.
29. A mounting plate as in claim 28 wherein the vacuum port or at least one of the vacuum ports is within the web.
30. A mounting plate as in claim 28 wherein the vacuum port or at least one of the vacuum ports is within a one of the finishing areas.
31. A mounting plate as in any one of claims 28 to 30 inclusive being circular and adapted to be driven by a random orbital means.
32. A mounting plate as in any one of claims 28 to 31 inclusive wherein the centre of the mounting plate is part of the web.
33. A mounting plate as in any one of claims 28 to 32 inclusive wherein the finishing areas are radially spaced about the centre of the mounting plate.

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34. A mounting plate as in claim 33 including at least three finishing areas.
35. A mounting plate as in claim 33 including four finishing areas.
36. A mounting plate as in any one of claims 32 to 35 inclusive including a plurality of vacuum ports, at least one vacuum port being through the web and proximal to the centre of the mounting plate, and other vacuum ports being through the web and proximal to the periphery of the mounting plate.
37. A mounting plate as in any one of claims 32 to 36 inclusive including a plurality of vacuum ports, at least one vacuum port being through the web and proximal to the centre of the mounting plate, other vacuum ports being through the web and proximal to the periphery of the mounting plate, and the mounting plate having respective vacuum ports with which the vacuum ports are adapted to align.
38. A mounting plate as in any one of claims 32 to 37 inclusive including a plurality of vacuum ports, at least one vacuum port being through each mounting area being adapted to align with a dust extraction aperture of a surface finishing pad.
39. A mounting plate as in claim 38 wherein the mounting areas are circular and the vacuum port of each mounting area being between the centre of the respective mounting area and the periphery of the respective mounting area distal the centre of the mounting plate.
40. A mounting plate as in any one of claims 28 to 38 inclusive wherein each mounting area has at least one channel therein adapted to direct dust to the vacuum port or a one of the vacuum ports.
41. A mounting plate as in claims 39 wherein each mounting area has at least one channel therein adapted to direct dust to the vacuum port through the respective mounting area.
42. A mounting plate as in any one of claims 28 to 41 inclusive wherein the mounting areas are circular and of diameter less than or equal to 373 mm.
43. A mounting plate as in any one of claims 28 to 42 inclusive including hook and loop means adapted for attaching a surface finishing pad to the mounting plate.

44. A mounting plate as in any one of claims 28 to 43 inclusive made from urethane.

45. A mounting plate as in any one of claims 28 to 43 inclusive comprising a plurality of layers between an external surface upon which the mounting areas lie and a rear surface, and the mounting plate including a first layer including the mounting areas made of urethane and a second layer of resilient material.

46. A mounting plate as in any one of claims 28 to 45 inclusive wherein the vacuum port or at least one of the vacuum ports fits over a hollow cylindrical dust extraction peg, the dust extraction peg having an external circumferential groove, and the mounting plate including a thin backing plate with a peg aperture of diameter slightly smaller than the external diameter of the peg and adapted to receive the dust extraction peg, and the thickness and resiliency of the backing plate being such that the mounting plate may be pushed onto and pulled off the dust extraction peg and when secured relative to the dust extraction peg the backing plate resides within the groove.

47. A surface finishing machine including the finishing surface finishing pad of any one of claims 11 to 27 inclusive and random orbital drive means adapted to drive the surface finishing pad.

48. A surface finishing machine including the mounting plate of any one of claims 28 to 46 and random orbital drive means adapted to drive the mounting plate.

49. A surface finishing machine as in either claim 47 or 48 including vacuum port means and connection means adapted to facilitate vacuum dust extraction.

50. A surface finishing machine as is claim 49 including dust collection means for the collection of the extracted dust.

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